

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A self-contained portable fuel cell electric power generator comprising:

- a portable enclosure;
- a solid oxide fuel cell stack within the enclosure;
- a hydrogen storage means within the enclosure;
- a hydrogen supply means at least partially within the enclosure providing hydrogen to the fuel cell stack;
- an oxygen supply means at least partially within the enclosure providing oxygen to the fuel cell stack;
- a power condition means connected to the fuel cell stack;
- and, at least one system controller operable to control hydrogen to the solid oxide fuel cell stack; and

wherein the fuel cell electric generator is mounted on a trailer for transport and adapted to be disassociated from transportation vehicle to supply power of at least 50 kW for local use.

Claim 2 (original): The fuel cell generator of claim 1 wherein the hydrogen storage means comprises:

- at least one feed line where into hydrogen can flow;
- at least one compressor means connected to the at least one feed line;
- one or more hydrogen storage tanks connected to the at least one feed line downstream from the at least one compressor means;
- at least one control valve connected to the at least one feed line;
- and, the at least one system controller controls at least one of the at least one control valve and the at least one compressor means, whereby the flow of hydrogen is affected.

Claim 3 (currently amended): A portable fuel cell electrical generator comprising:

- a portable enclosure;
- a solid oxide fuel cell stack within the enclosure;

a hydrocarbon fuel supply within the enclosure;
a prereformer within the enclosure;
an oxygen supply at least partially within the enclosure for supplying oxygen to the fuel cell stack;
an electrical power conditioning means connected to the fuel cell stack;
and at least one system controller operable to control hydrogen flow to the fuel cell stack;
and
wherein the fuel cell electric generator is mounted on a trailer for transport and adapted to be disassociated from transportation vehicle to supply power of at least 50 kW for local use.

Claim 4 (original): The fuel cell generator of claim 2 wherein each compressor means comprises an oil-cooled intensifier.

Claim 5 (original): The fuel cell generator of claim 2 wherein the oxygen supply means comprises:

at least one air inlet line;
and, at least one air compressor connected at one end to the at least one air inlet line and at the other end to the fuel cell stack.

Claim 6 (original): The fuel cell generator of claim 1 wherein the power conditioning means comprises at least one inverter with controller whereby the DC of the fuel cell stack is converted to AC.

Claim 7 (original): The fuel cell generator of claim 1 wherein the power conditioning means comprises at least one DC converter with controller whereby the voltage of the DC output of the fuel cell stack is stepped down.

Claim 8 (previously presented): The fuel cell generator of claim 1 wherein the power conditioning means comprises:

at least one DC converter coupled to a DC connector a controller whereby the voltage of the DC output of the fuel cell stack can be stepped down;

and, at least one inverter coupled to an inverter controller whereby DC output of the fuel cell stack can be converted to AC.

Claim 9 (previously presented): The fuel cell generator of claim 8 wherein the system controller controls at least one of the inverter controller, the DC converter controller, and the one of at least one compressor means.

Claim 10 (canceled)

Claim 11 (previously presented): The fuel cell generator of claim 1 wherein the portable enclosure is removably mounted on a trailer.

Claim 12 (original): The fuel cell generator of claim 11 wherein the portable enclosure further comprises a moving means.

Claim 13 (original): The fuel cell generator of claim 12 wherein the moving means is at least one axle; with at least one wheel at each end; affixed to the enclosure.

Claim 14 (original): The fuel cell generator of claim 12 wherein the moving means is a sled.

Claim 15 (currently amended): A transportable fuel cell generator comprising:

a trailer;

an enclosure on the trailer;

a solid oxide fuel cell stack within the enclosure;

a hydrogen storage means within the enclosure;

a hydrogen supply means at least partially within the enclosure, whereby hydrogen is supplied to the fuel cell stack;

an oxygen supply means at least partially within the enclosure, whereby oxygen is supplied to the fuel cell stack;

a power conditioning means connected to the fuel cell stack;

and, at least one system controller operable to control hydrogen and oxygen flow to the fuel cell stack; and

wherein the fuel cell electric generator is mounted on a trailer for transport and adapted to be disassociated from transportation vehicle to supply power of at least 50 kW for local use.

Claim 16 (original): The transportable solid oxide fuel cell generator of claim 15 wherein the hydrogen storage means comprises:

- at least one feed line where into hydrogen can flow;
- at least one compressor means connected to the at least one feed line;
- one or more hydrogen storage tanks connected to the at least one feed line downstream from the at least one compressor means;
- at least one control valve connected to the at least one feed line;
- and system controller controls at least one of the at least one control valve and the at least one compressor means, whereby the flow of hydrogen is affected.

Claim 17 (original): The transportable solid oxide fuel cell generator of claim 16 wherein the oxygen supply means comprises:

- at least one air inlet line;
- and, at least one air compressor connected at one end to the at least one air inlet line and at the other end to the fuel cell stack.

Claim 18 (original): The transportable fuel cell generator of claim 15 wherein the power conditioning means comprises at least one inverter with controller whereby the DC of the fuel cell stack is converted to AC.

Claim 19 (original): The transportable solid oxide fuel cell generator of claim 15 wherein the power conditioning means comprises at least one DC converter with controller whereby the voltage of the DC output of the fuel cell stack is stepped down.

Claim 20 (previously presented): The transportable solid oxide fuel cell generator of claim 16 wherein the power conditioning means comprises:

at least one DC converter with controller whereby the voltage of the DC output of the fuel cell stack can be stepped down;

and, at least one inverter with controller whereby DC output of the fuel cell stack can be converted to AC.

Claim 21 (previously presented): The transportable solid oxide fuel cell generator of claim 20 wherein the system controller also controls at least one of the inverter controller, the DC converter controller, and the air compressor.

Claim 22 (currently amended): A method of providing fuel cell generated electrical power the method comprising:

transporting an enclosure, on a trailer, the enclosure containing a solid oxide fuel cell stack, balance of plant hydrogen supply means, oxygen supply means, a power conditioner and a system controller therein, to a location, disassociating the fuel cell stack from transportation vehicle to supply power of at least 50 kW for local use;

generating electricity by providing fuel to the solid oxide fuel cell stack;
and connecting the electricity generated by the solid oxide fuel cell stack to an electrical load.

Claim 23 (original): The method of claim 22 further comprising disassociating the enclosure from the trailer before generating the electricity.

Claim 24 (previously presented): The method of claim 22 the method further comprising conditioning the electricity generated from the fuel cell stack before providing a connection to the electrical load.

Claim 25 (original): The method of claim 22 when the fuel supplied is hydrocarbon reformat and oxygen from compressed atmospheric air.